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A Survey of Securities Laws and Enforcement

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A Survey of Securities Laws and Enforcement

Abstract

We examine the theoretical and empirical literature pertaining to securities laws and their enforcement by regulators and courts to establish what is known and what is yet unclear. Recent empirical research in the field has established that law matters. Mandatory disclosure requirements, insider trading laws, safeguards against self dealing transactions, adequate regulatory powers and simple laws that are easily enforced aid in the development of capital markets. The debate is now focused on identifying which components of securities laws matter most and on what the optimal regulatory framework for each country should be. Although public enforcement of securities laws is important, I find that the largest impact comes from aspects of the law that facilitate private enforcement. This means that the development of capital markets depends crucially on the creation of laws that facilitate enforcement and the improvement of court procedures that allow for a more efficient dispute resolution.

Introduction

Securities laws have long been a controversial issue. An important tradition in law and economics, originating in the work of Coase (1960) and Stigler (1964), and most clearly articulated in the context of financial markets by Easterbrook and Fischel (1984) and Macey 1994), holds that securities laws are either irrelevant or damaging. According to this tradition, financial transactions take place between sophisticated issuers and investors and therefore market mechanisms suffice to ensure that securities markets prosper. To obtain the highest price for the shares they sell and to avoid sanctions, Issuers have incentives to disclose accurate information. Investors have an interest in collecting and analyzing relevant information regarding the securities they wish to purchase and to do so only form reputable firms as to avoid being cheated. Securities laws, therefore, are either irrelevant, to the extent that they codify existing market arrangements or damaging, in so far as they raise costs and interfere with the optimal functioning of markets.

An alternative tradition argues that "law matters", and securities laws in particular are important market-supporting institutions. This argument has a long tradition in regulatory economics (Landis 1938, Friend and Herman 1964), and has recently been rejuvenated by a new generation of legal scholars (Coffee 1984, 1989, 2002, Mahoney 1995, Fox 1999, Black 2001, Beny 2002). According to this viewpoint, general law and private contracting are insufficient to keep promoters from cheating investors because the incentives to misbehave may overrule the "long run" benefits of honesty and because private litigation may be too expensive and unpredictable to serve as a deterrent (see, e.g., Djankov et al. 2003). To reduce enforcement

costs and opportunistic behavior, a regulatory and contracting framework dictated by securities laws is required.

Recent empirical evidence supports this position. Glaeser, Johnson, Shleifer (2001) point to differences in securities laws to explain why securities markets stagnated in the Czech Republic but developed quickly in Poland during their transition from socialism. Coffee (1999), Siegel (2002), Stulz (1999), Doidge et al. (2001), Mitton (2002) and Reese and Weisbach (2002) examine the role of ADRs as bonding mechanisms and show that firms that have them are more valuable and have better access to external finance than do firms from the same country not listed in the US. This argument is also supported by Bhattacharya and Daouk (2002) who show that the cost of equity in a country decreases significantly after the first enforcement of insider trading laws and by La Porta et al. (1997, 1998), who find that countries with better legal protections of investors have better developed financial markets.

Enforcement of securities laws depend crucially on two pillars: the characteristics and powers of the regulator and the efficiency of courts. It has been argued that particular characteristics of the regulator make them more or less efficient (Holmstrom and Milgrom, 1991; Spiller and Ferejohn, 1992; Johnson, Glaeser, and Shleifer, 2001 and Pistor and Xu, 2002 among others). The effectiveness of a regulator depends on its degree of independence from the executive and on its degree of specificity. A regulator that is independent of the executive will probably be able to resist political pressure; while a regulator that is dedicated specifically to the securities market runs less risk of being distracted by other concerns. The powers of the regulator are also of vital importance. The Regulator's investigative powers, its right to sanction misconduct and the ability to command documents, prevent certain actions and impose criminal

sanctions may make a difference in the behavior of financial markets. In this paper, I explore the issues raised above to distinguish which characteristics are truly important and which are superfluous. This type of analysis is of great importance when designing or reforming a regulatory institution because important factors are often overlooked while other characteristics that matter only marginally receive attention. Criminal Sanctions, for example, are hailed as a vital reform for efficient securities regulation none withstanding the fact that empirical evidence shows that their actual impact is negligible.

The second pillar of the enforcement of securities laws is the courts system. The outcome from securities laws depends on the efficient execution of these laws through the courts system. Although the enforcement of securities rights and of property rights in general is crucial for economic development, theory alone is not sufficient to determine which mechanism is optimum. No system is perfect, therefore we need to analyze each to determine which one is optimum for a particular situation. Private enforcement works well in certain circumstances, but runs the risk of degenerating into violence. Public enforcement is also effective, but runs the risk of being "captured" by special interests or unduly influenced by agents with political power.

There are three basic theories about the origins of a legal system. The "development theory" argues that courts, like all institutions, are a fixed cost and will thus not develop efficiently until an appropriate level of development is reached (Demsetz, 1967; North 1981). According to this theory, a poor society will seldom have an efficient legal system while a rich one will. The "incentive" theory of courts holds that the incentives of the participants shape the outcome and the efficiency of the legal system (Messick, 1999). Courts will work poorly if agents are given incentives to drag out legal processes or to resort to litigation to resolve trivial

matters, while thy will work efficiently if there are incentives to resolve disputes expediently and agents must face the costs of resorting to the legal system (i.e., looser pays the legal fees). The third theory is "procedural formalism" and argues that the core characteristics of most legal systems are not endogenous but were transplanted years ago from a limited family of legal families (Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2003). This paper follows the procedural formalism theory and explores the relationship between the inherited level of judicial formalism and its effect on financial markets.

Following the introduction, section2 reviews the theoretical literature on the relevance of securities laws and stock market regulations and their enforcement. Section 3 reviews some recent empirical studies on insider trading laws and their enforcement, the impact of improved disclosure through cross-listing, and the relevance of securities laws for initial public offerings. Section 3 also establishes the basis fro the analysis of the impact of enforcement through two channels: first, regulatory sanctions or actions by the market regulator and, second private litigation through the court system. Finally, section 4 presents some preliminary conclusions and suggest areas for further work in the field.

Theoretical Section

The theoretical literature has long argued the relative merits and disadvantages of securities laws. Many scholars insist that regulation of securities is beneficial because it protects investors by mandating disclosure and that it foments the growth of markets by increasing the supply of truthful information. However, not everybody is convinced by these arguments and instead believe that securities laws are either irrelevant, because they contribute nothing the

market has not taken into account already, or damaging, because they restrict certain kinds of transactions and increase the costs of doing business.

Easterbrook (1984) analyses the effects of the securities acts of 1933 and 1934 and claims that, although securities regulation and mandatory disclosure of relevant information could lead to more efficient market outcomes, there is no evidence that existing Securities and Exchange Commission (SEC) rules have improved market efficiency. Macey (1994) criticizes securities regulation and regulators, the SEC particularly, because he feels that these institutions have fallen into obsolescence. Both authors agree that securities regulations have the potential to be market enhancing institutions, but that in their current form they do more harm than good.

Easterbrook (1984) claims that it is more likely that securities regulation protect and benefit special interest groups and other vested interests than investors. Disclosure rules, for example, give large firms a competitive edge over their rivals since the cost of disclosure is mostly independent of firm size. Investment banks and audit firms also benefit from regulations because all firms that wish to list on the stock exchange need to purchase their products. Instead of allowing firms to explore alternate paths to the market, all must settle for what regulators deem the "best path." Macey (1994) acknowledges that current regulations were probably beneficial at their inception to assuage the fear brought about by the 1929 stock market crash, but argues that technological and administrative change have made them obsolete. Instead of reducing transaction costs and fraud, regulations now stifle innovation because of the increased risk of litigation and the arduous task of regulatory approval.

Both authors refute the argument that securities regulation is necessary to protect minority investors by increasing the amount of truthful information in the market. The existence

of a large pool of sophisticated or "educated" investors in the market guarantees that all available information is priced into the market. Therefore, uneducated investors are not in any risk of being exploited, on the contrary they benefit from the research of educated investors without paying any of the costs. Small investors are uninformed or unsophisticated because they chose to; because their perceived benefits of free-riding off other investor's research and information is higher than that of analyzing and processing the information themselves. Moreover, they could easily receive the same benefits, if any, by "renting" institutional investors through mutual funds or other professionally managed services.

Lastly, although mandatory disclosure laws can be a market enhancing mechanism if they allow information to be gathered by the agent with the lowest social costs, it does not follow that more is always better. Securities regulation seldom reflects the best available economic knowledge and is instead driven by political considerations and ambitions. Turf-wars and burocratic imperialism is the order of the day as new rules and regulations are implemented without regards to a cost benefit analysis but simply on the notion that any problem merits a regulatory solution.

An alternative view sees the function of the laws, as reducing the costs of private contracting and enforcement (Hay, Shleifer, and Vishny 1996, Hay and Shleifer 1998, Glaeser and Shleifer 2001a, Bergman and Nicolaievsky 2002). Efficiency considerations suggest that the lowest cost provider of information about a security should collect and present this information, and be held accountable if he omits or misleads. An efficient system would provide them with incentives to collect and present information to investors, and hold them liable if they do not. In securities laws, this strategy generally takes the form of disclosure requirements and liability

rules that make it cheaper for investors to recover damages when information is wrong or omitted. We attempt to capture empirically the fundamental features of mandatory disclosure and of private litigation enforcing it.

Grossman and Hart (1980) show that with perfect law enforcement (i.e., automatic criminal sanctions for not telling the truth), promoters have an incentive to reveal everything they know. The reasoning is that without such revelation, potential investors would assume the absolute worst and under price the stock by more than if they knew the truth. They cannot say anything more optimistic than the truth because of the automatic criminal sanctions. Crucially, Grossman and Hart point out that, without perfect enforcement, or with positive costs for disclosure, these extremely favorable results for the market solution do not hold. For example, the existence of positive transaction costs would justify a securities law on the grounds of social welfare; because, through regulation, the burden of disclosure or certification can be assigned to different agents depending on which scenario yield a lower social cost.

In most legal systems, establishing and enforcing a claim against them is a difficult and expensive matter. First, there is the problem of allocating responsibility among directors, officers, accountants, and distributors. Second, there is the problem of errors: criminal sanctions often require the proof of intent, and defendants can often claim that they erred rather than deceived even if the information they supplied initially was strictly inaccurate. Third, and most importantly, severe problems in security issuance arise from sins of omission, not commission. A promoter can fail to reveal the debts of a company's subsidiary, or special arrangements with another firm he or his family controls.

When dealing with omissions, enforcement becomes a severe problem. Proving criminal intent is even harder and it may be extremely costly for the plaintiffs – who after all are new shareholders with only moderate sums invested in the shares – to establish liability of the defendants. The issuer, the accountant, or the distributors usually claim that the omitted information was not material, and hence it was not negligent of them to omit its disclosure. A court must then take the position as to whether the omission is material – a decision fraught with delays, uncertainty, and costs to the plaintiffs. The negligence issue is even more extreme for distributors, who usually claim that they relied on what the management told them – and when the news is bad enough, the distributors might be the only ones with resources to compensate investors. The bottom line is that with costly enforcement an investor cannot rely on markets and private litigation to secure accurate disclosure of information.

This enforcement-based reasoning forms the analytical foundation of the case for securities laws. Market mechanisms and litigation supporting private contracting may be too expensive and therefore securities laws, in so far as they reduce the cost of contracting and resolving disputes, can encourage equity financing of firms and stock market development.

The requirement of mandated disclosure can be divided into requirements with respect to specific pieces of information and residual requirements. There are three important specific areas of disclosure: ownership and compensation, contracts, and transactions between the company and its directors. First, there is the issue of whether the prospectus must disclose share ownership and compensation as well as the overall ownership structure. This is important as executive compensation is a potential source of self-dealing or tunneling (Johnson et al. 2000). Likewise, complicated patterns of cross-ownership are often used to divert cash flows from shareholders of

public firms to promoters or related parties (Bertrand et al. 2002). Secondly, it is relevant to know about extraordinary contracts as these raise serious adverse selection and moral hazard problems. In a well-known Polish case, for example, the major national state company gave up a significant share of a new business to an entrepreneur who secured for it a government license, and did not disclose this fact in the prospectus (Johnson et al. 2001). Thirdly, there is the issue of mandatory disclosure of related party transactions. Countries have varying disclosure requirements about transactions between the issuing company and its directors, officers, and/or large shareholders – such transactions are the major form of tunneling in most of the world (Johnson et al. 2000, La Porta, Lopez-de-Silanes, and Zamarripa 2003). Presumably, the more comprehensive disclosure of such transactions can both limit them and present potential investors with a more accurate picture of what they are buying.

Specific items in the prospectus, however, are not the most important matter information required to be disclosed. Residual disclosure requirements include all material information that may be of interest to the average investor. When bad news hits after a security issuance, the relevant question becomes whether the information available to investors was sufficient or if they were mislead by the issuer, the distributor, and/or the accountants who prepared the prospectus. Recall that, from the efficiency perspective, these parties should be collecting the information and be held automatically responsible when they fail to present it (Grossman and Hart 1980). A central question about the bite of the mandatory disclosure requirements is how investors can recover losses from the omission of material information.

There are three liability regimes. In the "base" case, the standard of liability is negligence: the plaintiff must show that the issuer, the underwriter, or the accountant was

negligent in omitting information from the prospectus. Some countries make it even harder for the plaintiffs, who must show that the defendants were grossly negligent or intentioned in omitting the information that later comes to light. But perhaps most interestingly, several countries shift the burden of proof from the plaintiffs to the defendants. Sometimes the defendants are strictly liable and thus cannot avoid liability. Alternatively, they must themselves show that they exercised due diligence in preparing the prospectus. This shift in the burden of proof can, in principle, significantly reduce the costs to the plaintiffs of establishing liability.

The first view of how securities laws matter holds that private enforcement incentives are often insufficient, and a public enforcer, such as a Securities and Exchange Commission, is needed to support trade. A private plaintiff owns only a few shares, and his potential payoff does not suffice to pay for the lawsuit. A public enforcer can produce and interpret rules and regulations, as well as sanction misconduct either on its own or by bringing suit. A public enforcer might have an advantage over a private plaintiff because it is focused, expert, or can be presented with incentives better reflecting the social benefits of enforcement (Becker 1968, Polinsky and Shavell 2000). The view that the central benefit of securities laws is the creation of a public enforcer has been originally advocated by Landis (1938), and has been recently discussed in both theoretical and empirical work (Glaeser, Johnson, and Shleifer 2001, Glaeser and Shleifer 2001b, Pistor and Xu 2002).

A different view of why securities law matters holds that its principal benefit is not the creation of a public enforcer, but rather the direct reduction in the costs of private contracting and enforcement. Regulation can standardize securities contracts by mandating disclosure requirements or limiting certain kinds of transactions as well as simplify private litigation.

Without standardized contracts, litigation would be governed by contract and tort law, with grave uncertainty about outcomes because such matters as intent and negligence need to be sorted out in court (Easterbrook and Fischel 1984). Securities law can structure contracting and litigation by explicitly describing the obligations of various parties and burdens of proof, thereby reducing the costs to them and to the court of establishing liability (Hay, Shleifer, and Vishny 1996, Glaeser and Shleifer 2001a, 2002, Bergman and Nicolaievsky 2002). With standardized contracts and litigation, the costs of writing and enforcing contracts decline, benefiting markets.

For private enforcement to succeed however, it is necessary to establish an efficient enforcement mechanism and a set of civil procedures that allow for expedient and just litigation. Too often, burdensome formalism and unnecessary blockages prevent the judicial system form fulfilling its intended role as guarantor of private enforcement. For this reason, it is essential to look at the structure of courts and their procedures. The enforcement of laws and contracts are almost always taken for granted by economists who endlessly discuss the difficulties related to efficient contracts such as asymmetric information and moral hazard while ignoring this potentially larger source of inefficiency. It is vital to take into account the difficulties related to the enforcement of laws and contracts and to study what characteristics of the legal system can be modified to minimize costs and thus maximize economic growth.

Legal institutions have evolved to enforce contracts and represent a sample we can exploit to analyze the determinants of the efficiency the judicial system. Ceteris paribus, higher formalism of the judicial system is related to longer durations of dispute resolution, lower enforceability of contracts, higher corruption and lower honesty in the courts (Djankov et al. 2003). This clearly suggests that different mechanism for enforcing laws make a substantial

difference and that legal systems with strictly coded procedures that drag out litigation are related with a less efficient enforcement of contracts and laws.

Beyond the general debate regarding the benefits of regulation, there is also uncertainty regarding the most appropriate rules and the characteristics of the regulator. One of the most common ideas is that the Supervisor should be insulated; to prevent Executive interference in its decision making that might force it to side with politically influential albeit dishonest promoters. A related idea is that an effective Supervisor must be focused on the securities market, to ensure that all the attention is focused on the success of financial markets rather than being distracted by other considerations (Holmstrom and Milgrom, 1991).

A second crucial question is what powers should the regulator posses. Three broad categories are usually considered: the power to regulate, the power to investigate, and the power to sanction misconduct. The power to regulate has been studied most closely (e.g., Spiller and Ferejohn 1992); the idea is that the legislature writing securities laws do not have sufficient information or resources to produce all the desirable rules, especially as the market evolves. It therefore delegates these powers to a regulator, who has the expertise and the resources to change the rules (Landis 1938, Pistor and Xu 2002). The second is the power of investigation. Unless the issuer is strictly liable after all adverse news events following security issuance, the question arises as to why the information was not revealed to investors and what the costs of this omission are. Answering these questions is costly, particularly for private plaintiffs pursuing litigation (Johnson, Glaeser, and Shleifer 2001). A Supervisor can be empowered to command documents from issuers, distributors, or accountants, as well as with the power to subpoena the testimony of witnesses. Such powers can in principle enable the Supervisor to ascertain the

reasons for omission, which can then – as a public good – become the basis for sanctions, or for criminal or civil litigation. The third power of the Supervisor is that of imposing sanctions. These may involve ordering the directors of a public firm to rectify non-compliance with disclosure requirements, forcing the implementation of changes recommended by outside reviewers, and/or compensating investors for their losses.

A particular form of sanctions, and one which many countries have in their laws, is that of criminal charges. These provisions can apply to directors, distributors, or accountants. The effect of these penalties are of special interest since a popular sentiment in the current discussions of securities laws sees criminal sanctions as essential to enforcing good practices.

Ultimately, the issues discussed above regarding the importance of securities regulation and the structure of the optimal regulatory body can only be answered empirically. In the next section we survey several of the most important papers regarding securities laws and attempt to provide answers to the questions raised above.

Empirical Section

There are numerous empirical studies that attempt to quantify the effects of different securities laws on firm performance and capital markets development. Although most papers are related in some fashion, we separate them into three broad categories; insider trading laws, Increased disclosure through cross-listing, and securities laws of initial public offerings (IPOs). Recent studies have focused on the effects that insider trading laws on capital markets and on firm performance (Beny, 2000; Bhattacharya and Hazem 2002). They find that markets with effective laws against insider trading have a wider shareholder base, more liquidity in the market

and provide companies with a lower cost of capital. Others analyze Disclosure laws and the effects of cross listing (Doidge, Karolyi and Stulz, 2001; Reese and Weisback, 2002). By reducing transaction costs and asymmetrical information, disclosure requirements help provide firms with a cheaper access to capital. Similarly, firms from other counties can gain by cross-listing as this is tantamount to engaging in self imposed mandatory disclosure. Finally, La Porta, Lopez-de-Silanes and Shleifer (2003) analyze the impact of securities laws in IPOs and conclude that securities regulation make a substantial difference in the development of stock markets. Moreover, they find little evidence that public enforcement matters and extensive evidence that private enforcement drives the positive results.

Insider Trading Laws

Insider trading (IT) is a problem for capital markets because of two main reasons. The first is that the presence of asymmetrical information in the marketplace, due to insider trading, increases the bid-ask spreads and thus the transaction costs of trading stock. Increases in transaction costs lead investors to demand a higher expected return on investments and thus increase the cost to firms of raising capital. The second reason is that, with no penalty for insider trading, controlling shareholders may be tempted to make profits trough stock tips rather than from more efficient monitoring. In sum, laws against insider trading should reduce asymmetrical information, enhance monitoring and therefore reduce the cost of capital.

Beny (2000) uses a cross-section of 33 countries to test the effect of IT laws on ownership concentration and on market liquidity. The first hypothesis states that strong IT laws should be negatively related to the concentration of ownership because they weaken the private

benefits of control. As Demset (1986) and Bhide (1993) argue, in order for majority owners to engage in costly oversight activities, they need to be compensated for their efforts and one way this can happen is by using insider information to trade stock. The second hypothesis is that strong IT laws should be positively related to market liquidity because they reduce transaction by reducing asymmetrical in the market.

To test his hypothesis, Beny (2000) constructs an IT law index to serve as a proxy for the severity of IT laws in a country. It compromises five dummy variables: the first component is if third persons tipped off about non-public information are penalized, the second is whether corporate agents are punished for tipping off third parties, the third is whether the monetary fines imposed on insider traders are proportional to the insider trading profits, the fourth is whether the law grants injured investors a private right of action; and the last one is whether there are criminal penalties for insider trading.

The results show that ownership concentration, estimated as the percentage of shares held by the top 3 shareholders in the ten larges firms, is negatively correlated with the strength of IT laws. An increase of 0.72 in the IT index, approximately the distance between the average of the English and French legal system countries, leads to a 6.6% decrease in market concentration. On the other hand, market liquidity, is positively correlated with the IT index, as an increase of the same magnitude as above increases the rate of market turnover by 16.5 percent.

Bhattacharya and Daouk (2002) test whether the presence and enforcement of IT laws by a country decreases its costs of capital. After collecting information on all countries that have stock markets, 103 in 1998, they find that 87 have laws banning insider trading but only 38 of them have ever enforced them. These numbers were 34 and 9 respectively before 1990; which

leads to the conclusion that insider-trading laws are only a recent phenomenon in securities laws. They test their hypothesis in four ways: first, using descriptive statistics they analyze the mean returns and liquidity of firms five years before the introduction (enforcement) of IT laws and five years afterwards; second, they use an international asset-pricing factor to determine the impact of IT laws and enforcement on the value of companies; third they use a constant growth dividend discount model to extrapolate the cost of equity from changes in dividend yields; the fourth and final test involves using surveys of country risk forecasts as predictors of the cross section of expected equity.

All models find that the cost of capital is unaffected by the presence of IT laws, but is strongly affected by the enforcement of these. The coefficients estimated for the various models show a minimum effect of 0.3 percentage points (for the credit rating approach) and a maximum of 7 percentage points (the international asset pricing model approach). It is clear that enforcement of IT laws has a negative and significant effect on the cost of capital, but the authors warn that the results should be taken with care because it is possible that the relationship between IT laws and the value of companies captures spurious correlations or is biased by the endogeneity of enforcement.

Current empirical evidence suggests that laws banning insider trading are an important, if recent, addition to securities laws. By reducing the presence of asymmetrical in the market and by constraining management and controlling shareholders to focus on running the firm, IT laws can reduce the cost of capital and increase the liquidity of the market. Moreover, it is not enough simply to put the laws on the books, as agents must credibly believe that they will be prosecuted it they break them for the laws to have their desired effect.

Disclosure Requirements

Recent research has focused on the value of disclosure requirements and effective securities regulation to protect minority shareholders. A natural experiment that allows us to observe the value of this protection is the cross-listing of firms from countries with weak protection on stock markets from countries with high investor protection. As Doidge, Karolyi and Stulz (2001) explain, cross listing premiums cannot be explained by the typical assumption that listing in the U.S. lowers the costs of raising capital by enlarging the shareholder base and allowing companies to tap previously unattainable sources of finance. If this were true, all companies with perceived benefits from lower capital costs sufficient to pay for the costs of listing (investment-bank fees, accounting certification etc…) would list in the U.S. The number of firms that actually list is much lower. Also, the argument of tapping previously unavailable sources of finance would imply that listing in the U.S. would have been more attractive in the past than now and would be more attractive for countries with less integrated capital markets than for those with capital markets that are highly integrated to the United States or other strong markets. Both of these assumptions are found to be incorrect. Cross border listings have increased substantially in the past 10 years and firms that receive the highest cross-listing premiums come from counties with well developed and integrated capital markets. Finally, the standard asset pricing models cannot explain why the premium for cross listing is larger for exchange listings than for private placements.

Doidge, Karolyi and Stulz (2001) find that firms cross-listed in the US trade at an average Tobin q that is a 16.5% larger than those that do not. Using information on 955 cross-

listed firms and 7,725 locally listed firms from 40 countries they confirm that cross-listed firms are valued more and provide clues as to why this is so. For the sub-sample of firms that are exchange-listed (the category that requires most disclosure), the average premium increases to 36.5%. These results are robust even when controlling for growth opportunities of the firms, shareholder protection proxies, capital market development variables, other country specific factors and endogeneity of the decision to cross-list. The hypothesis offered is that listing in the U.S. is not mainly about widening the shareholder base or tapping previously unavailable sources of finance but instead that of signaling to minority shareholders that they will not be exploited by controlling groups. It might be in the best interest of majority shareholders to make these commitments in order to secure a lower cost of capital to finance a greater number of growth projects. This alternative theory helps explain why only a few companies list in the U.S; although most companies would benefit from cross listing, most controlling shareholders would lose.

Reese and Weisback (2002) provide similar evidence regarding cross-listings. They believe that foreign firms cross-list in the US primarily as a way of increasing investor protection rights and therefore the value of the company. Their sample compromises 2,038 foreign companies that cross list in the United States between 1985 and 1999.

If increased protection for minority shareholders is the main reason for cross-listing, we would expect to observe three things: first, equity issues should increase following all cross-listings regardless of shareholder protection; second, the increase should be larger for cross-listings form countries with weak investor protection; finally, equity issues following cross listings in the US would tend to be in the US from countries with strong protection and outside

the US for countries with weak protection. All three hypotheses are proved correct and are robust to the inclusion of instrumental variables and controls for firm characteristics.

Although there is ample empirical evidence that cross listing increases the protection of minority shareholders and that this is the principal reason that firms do it, not everybody agrees that firms can "borrow" a securities regime from another country. Siegel (2002) argues that this "convergence hypothesis" is false because firms cross-listed in the U.S. have not been subject to the same regulations (in practice) as domestic firms and are thus undeterred by stricter securities laws. Of all Mexican companies listed prior to the 1994-1995 crisis, there is conclusive evidence that eight of them suffered from some form of illegal expropriation from insiders. From these eight, three were directly listed on the U.S. stock exchange and all were in some way tied to a company that was cross-listed. In fact, even when controlling for the economic sector of activity, size of the firm, openness to external markets and leverage, firms with ADR´s are about 20 percent more likely to suffer from insider theft than firms that don't. Moreover, Siegel (2002) argues that the discovery of fraud had nothing to do with being listed on the US stock exchange. The toughest penalty that has been placed on a fraudulent firms is that of de-listing and no claims for the recovery of funds have been filed by the SEC or by private parties in the US. These findings suggest that bonding to a U.S. stock exchange may not necessarily entail higher levels of protection for minority shareholders.

Cross-listing is one of the main ways we can asses the impact of securities laws. Recent empirical works suggest that firms are able to "borrow" the regulatory regime of more developed countries and benefit from a lower cost of capital. Although we cannot rule out other hypothesis that attempt to explain cross listing to overcoming fragmented capital markets, the pattern of

equity issues and evidence about the type of firm that engages in cross-listing supports the hypothesis that the main benefit is gained through a greater protection of shareholder rights. Nevertheless, given the significant gap between laws on paper and actual enforcement, not everybody is convinced that countries can effectively borrow securities regulation from other jurisdictions. The SEC's poor record regarding securities laws violations of Mexican firms listed in the U.S. hardly supports the conclusion that insiders had an incentive to respect minority rights any more after cross-listing than they did before.

Securities Laws of Initial Public Offers

Most of the recent literature regarding securities laws agrees that regulation is an essential market supporting institution with the potential to deepen capitals markets and provide firms with cheaper access to capital. Nevertheless, the approach outlined so far have been limited in the scope of laws they consider or the sample they test. To overcome these shortfalls, La Porta, Lopez-de-Silanes and Shleifer (2003) use a comprehensive sample to test if securities laws make a difference, to gauge the relative importance of public and private enforcement and to determine the components of securities regulation that matter most.

Using a sample of 49 countries, they construct indexes for disclosure requirements, burden of proof, characteristics of the supervisor, investigative powers of the supervisor, and sanctions available to the supervisor. The most important proxies they use to gauge the development of securities markets are the five year average of the ratio of stock market capitalization to GDP, the logarithm of domestic publicly-traded firms in each country relative to its population, and the value of initial public offerings as a percentage of GDP.

Besides testing the effect of securities laws on the dependent variables outlined above, they investigate the relative role of public vs. private enforcement. The relative efficiency of these measures and their likely interrelation with the level of economic development of a country can provide useful insights when recommending securities reform as the best policy for regulating securities transactions in a developed country may not necessarily be the best policy for developing countries.

Regressions that control for Anti-director rights, GDP per capita and Efficiency of the Judiciary allow us to extrapolate the relationship between our measures of enforcement and our measures of market development. Although both higher GDP per capita and efficiency of the judiciary are associated with larger stock markets, public enforcement is not significantly related to market capitalization. Although there is a positive relationship between these two variables, it fails to achieve statistical significance. Moreover, none of its individual sub-indexes- Supervisor Characteristics, Investigative Powers, Orders and Criminal Index- is a significant predictor of market capitalization. These week results are also observed for other proxies of market development: Supervisor characteristics do not matter for any of the outcome variables while Investigative Powers are only associated with a larger number of domestic firms per capita. Similarly, the power to issue Orders and to impose Criminal Sanctions matters only for the number of IPOs. These patchy results regarding the effects of public enforcement suggest that it is private enforcement is the driving force behind the effect of laws on securities markets and that public enforcement plays only a secondary role.

The effects of private enforcement can be observed in Figures 2-4. These show that private enforcement and both of its sub indexes –Enforcement Requirements and Burden of

Proof- are positively related to market capitalization. The relationship is statistically significant and quantitatively large. To put it in perspective, the external-market-capitalization-to-GDP ratio ranges from 0.002 in Uruguay to 1.44 in Switzerland. The estimated coefficients suggests that improving disclosure requirements index by two standard deviations – roughly the distance from Denmark or Norway to the U.S. – is associated with an increase in the market-capitalization-to-GDP ratio of 0.27. Similarly, lowering the index of burden of proof by two standard deviations – the distance from Ireland to the U.S. – is associated with an increase in the market-capitalization-to-GDP ratio of 0.20. Moreover the effect of private enforcement is on the development of capital markets is not limited to market capitalization. Figure 5 shows the positive relationship between private enforcement and the number of IPOs per capita. Figure 6 shows that access to equity is also positively related to private enforcement. These results are statistically significant at the 1 percent level.

Panel A in Table 2 shows, that private enforcement is associated with more developed stock markets for all seven dependent variables. The estimated coefficients predict that a two-standard deviation increase in private enforcement is (roughly the distance from Ireland to the U.S.) is associated with an increase of 0.30 in the external market-to-GDP ratio, a 55% rise in listed firms per capita, a 2.34 increase in the IPO-to-GDP ratio, a 12 percentage point drop in the block premia, an improvement of 1 point in the access-to-equity index, a decrease of 5.25 points in the earnings manipulation index, and a 10 percentage point drop in ownership concentration.

As already discussed, the results for public enforcement in Panel B are less consistent. For the number of listed domestic firms and IPOs, it is public enforcement, but not anti-director rights, that matters, and the economic effect of public enforcement in these regressions is large.

A two-standard deviation increase in public enforcement (roughly from Sweden to the U.S.) is associated with a 42% increase in listed firms per capita and adds 1.6 to the IPO-to-GDP ratio. In contrast, anti-director rights, but not public enforcement, typically matters for the other measures of stock market development (with the exception of earnings manipulation for which neither variable matters).

Finally, Panel C presents the results of a horse race between our proxies for private and public enforcement. The key result is that private enforcement is significant in all but one of the regressions (earnings manipulation). In contrast, public enforcement is never significant when combined with private enforcement (i.e., private enforcement knocks out public enforcement from the regressions for domestic firms and IPOs).

To ensure the robustness of these results, a few additional issues are addressed to correct for possible weakness of the results stemming from measurement problems, from the possibility that omitted variables may explain the strength of the results on private enforcement and for the possible endogeneity of private enforcement.

Public enforcement may only be effective in countries with efficient government bureaucracies. To address this concern the authors reran the regressions for the sub-sample of countries with per capita GDP above the median. They find no consistent evidence that public enforcement is correlated with larger securities markets in these countries (See Table 3). A related concern is that public enforcement may be ineffective if the Supervisor lacks adequate resources. To address this concern, they collected data on the number of employees that work for the Supervisor and found them to be insignificant when included in the regressions. To capture any interactions between public enforcement and the resources of the Supervisor, they separate

the sample according to whether the number of employees working for the Supervisor is above or below the sample median and ran separate regressions for both groups of countries. Public enforcement is statistically significant only for IPOs and earnings manipulation in countries with well-staffed regulators (and for domestic firms in countries with poorly-staffed ones).

It might be argued that financial markets are small where the state is large. For example, few firms may be publicly-traded in countries where the state owns most of the capital. Omitted variable bias may thus account for the strength of the results if private enforcement is negatively correlated with the role of the state in the economy. To address this concern, they included two measures of the role of the state in the economy in our regressions: (1) the fraction of the capital stock in the hands of state-owned companies from La Porta et al. (1999); and (2) the fraction of the banking assets controlled by government-owned banks from La Porta, Lopez-de-Silanes, and Shleifer (2002). The results on securities laws remain qualitatively unchanged. Another omitted variable story holds that countries with large capital markets may come to rely on private enforcement because their institutions are more responsive to the interests of small investors. However, measures of democracy and political rights are uncorrelated with private enforcement (and public enforcement). Moreover, such measures were not significant predictors of financial development in the regressions.

Finally, it is possible that governments adopt better securities laws in countries with buoyant financial markets. For example, countries with large financial markets may adopt good regulations because there are fixed costs of doing so. This argument is undermined by the systematic differences in investor protection across legal origins. Reverse causality is also undermined by the fact that the dimensions of the law that are expensive to implement – for

example, having an independent and focused regulator – do not seem to matter. On the contrary, the rules that matter most are cheap to introduce. A second reverse causality argument holds that regulators swarm toward large securities markets, because there are bigger rents to secure from regulating them. This argument is also undermined by the fact that it is precisely the regulations that render the unimportant, namely those that standardize private contracting and litigation that have the tightest association with stock market development. The endogeneity of private enforcement can be partially addressed using instrumental variable. The legal origin of a country is almost always determined exogenously; that is by conquest or transplantation decades or centuries ago. Even though legal systems have evolved since them, they often keep certain core characteristics that make the legal system of one family similar to others with the same origin. For example, countries with English legal origin usually have a significantly higher degree of formalism in their court system and tend to rely more on private enforcement than countries with French legal system. Using Legal origin as an instrumental variable together with the principal components of anti-director right and private enforcement, they carry out a two stage least squares analysis and confirm that the results regarding private enforcement are robust.

The fact that private enforcement has such a large impact makes it a necessity to take a look at the mechanisms through which private litigation takes place. The functioning of courts across countries is far from the ideal assumed by most economic models as there seems to be substantial costs associated to the enforcement of contracts and laws through litigation. There are also great variations among counties, which begs the question of what can be changed in the judicial system to make courts function efficiently. To answer this question, Djankov, La Porta, Lopez-de-Silanes and Shleifer (2003) analyze the exact legal procedures required to evict a

tenant for non-payment of rent and to collect a bounced check using local courts in the country's largest city. They collect information derived from questionnaire answered by attorneys from 109 countries associated to Lex Mundi and Lex Africa. The questionnaire covered detailed information regarding the amount of the claim, the location and main characteristics of the litigants, the presence of city regulations, the nature of the remedy requested y the plaintiff, the merit of the plaintiff's and defendant's claim, and the social implications of the judicial outcome.

Figure 7 shows that court formalism clearly maps into a longer duration of the Judicial Process. The results are statistically significant at the one percent level. It is often argued that even if extra formalism leads to lengthier processes, this should not be a concern because it is the cost a country must pay for a fairer and more objective legal system. Figure 8 however shows this to be false. Contrary to what might be expected, greater formalism in the judicial system is related to less fairness and impartiality of the system. Not only does formalism come at a cost in terms of the length of the process, but there seems to be no upside to it it terms of fairness or impartiality. These results are robust to instrumental variables that take into account the possible endogenous nature of court formalism.

Conclusion.

It is clear from available empirical evidence that securities laws make a difference; the answer to the question of whether "law matters" is a definite yes. Although there are theoretical arguments for and against securities regulations, there is mounting evidence that securities laws matter to the development of capital markets. Evidence from the studies on insider trading laws and disclosure through cross-listing suggests that enforcement is equally important. Laws that

stay on the books and are not enforced are tantamount to not having regulation at all.

The findings of La Porta, Lopez-de-Silanes and Shleifer (2003) suggest that securities laws matter because they reduce the costs of private contracting and litigation rather than provide for public regulatory enforcement. That is, laws that facilitate the private enforcement of the law matter the most, especially in less developed countries. Several aspects of public enforcement, such as having an independent and/or focused regulator or criminal sanctions, do not matter; while aspects of private enforcement such as extensive disclosure requirements and having simple procedures to facilitate recovery of losses for investors matter a great deal and are associated with larger stock markets. Moreover, court efficiency is of fundamental importance to the development of capital markets and one which has typically been neglected by economists. Far from the ideal of perfect and free enforcement of laws and contracts, countries have extensive and complicated legal systems. The optimal institutional framework will depend on the tradeoff between the costs of market and government failure. For securities markets, the empirical evidence points towards greater efficiency in the private enforcement of public rules.

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Table 1

Summary of Recent Empirical Work

Author	Data and time period	Methodology	Results and Conclusions
Beny (2000)	Cross section of 33 countries.	Constructs an Insider Trading (IT) law index and uses it to check the relationship between the severity of IT laws and the degree of ownership concentration and market liquidity	A change in the IT index of 0.72 (the distance between the averages of English and French legal origin) reduces concentration by 6.6% and increases liquidity by 16.5%.
Bhattacharya and Daouk (2002)	Information on 103 countries (sample includes all countries with a stock market as of 1998)	Test the effect of IT laws and IT enforcement actions on the cost of capital (CC) through 4 methodologies: descriptive statistics, international asset pricing model, dividend yields and country risk forecast surveys.	Existence of IT laws does not reduce the CC but the enforcement of these laws has a statistically significant negative effect on CC ranging from 0.3% to 7%.
Doidge, Karolyi and Stulz (2001)	955 cross-listed (CL) firms and 7725 control firms from 40 countries. Firm data is from 1997.	Country average Tobin Q measures are estimated for CL firms and for control firms. Inferences regarding the reasons to cross-list can be obtained by observing the premiums paid for these companies.	There is an average premium of 16%for CL firms and a premium of 36.5% for exchange-listed CL firms (this is the toughest category regarding disclosure requirements). Evidence shows that the main reason to cross-list is to give shareholders the certainty that they will not be exploited; and thus raise capital more cheaply.
Fox (1999)	Reviews empirical work done by Stigler (1961), Simon (1989) and Benston (1973).		Mandatory disclosure is the best way to achieve the social maximizing outcome. Studies that attack the benefits of disclosure are fundamentally flawed and concepts of Issuer choice are riddled with problems that make them impossible to implement.
Glaeser, Johnson and Shleifer (2001)	Polish and Czech stock markets during the 1990's. Information of Market capitalization, number of firms and IPO's	Compares the relative performance of the Polish stock market (regulated) with the Czech stock market (less regulated). Performance is measured by market capitalization, number of listed firms and number of IPO's.	The Polish stock exchange outperformed the Czech one by a wide margin on all measures of performance.

Author	Data and time period	Methodology	Results and Conclusions
La Porta, Lopez-de-Silanes and Shleifer (2003)	Extensive database of information for securities laws governing the issuance of stock in the 49 counties with largest market capitalization in 1993.	Analyze the characteristics of laws governing securities regulations for IPO's as well as the responsibilities of the issuers and distributors to find their relationship with 7 measures of market development	Conclude that securities laws matter a great deal to market development.. They find little evidence that public enforcement benefits stock markets and strong evidence that laws that facilitate private enforcement, through disclosure and liability rules, benefit stock markets.
Leuz, Nanda and Wysocki (2002)	Financial accounts for 8,000 firms from 31 countries from 1990-1999 for a total of 70,995 firm-year observations.	Use four proxies for earnings management to estimate which countries engage more frequently in this practice.	Countries fall into one of three groups, and sorting is very similar to what it would have been if legal origin was the variable of choice. "outside economies" are mostly common law countries with large stock markets and low earnings management. The reverse is true for "insider countries" which are mostly from French legal origin.
Reese and Weisback (2002)	Sample of 2,038 foreign companies listed in the for the period 1985-1999. Restricted sample of 1,051 firms for which detailed financial information is available.	Test the hypothesis that the main reason why firms cross-list is to increase investor protection. If this were true, we would expect: equity issues to increase after cross-listing; a larger increase for firms from countries with weak legal protection; and equity issues from countries with stong protection should be in the US while those of weak countries should be outside the US.	All three hypothesis are found to be true and are robust to instrumental variables.
Siegel (2002)	All Mexican listed companies before the 1994 crisis. Extensive information regarding published news of theft in Mexican companies. Information on cross listed companies in the US from 1995-2002.	Challenges the "convergence hypothesis". Tests the enforcement record of the SEC with regards to Mexican cross-listed firms and estimates the impact of being a CL firm on the probability of having assets stolen by an insider.	Finds extremely poor performance by the SEC in preventing or punishing abuse by CL firms. Surprisingly, having an ADR increases the probability of asset theft by insiders by 19.76% to 23.29%. In the six years, from 1995 to 2002 no action was taken against CL firms from an emerging market; despite the Mexican, Asian and Russian crisis.
Simon (1989)	Return information on stocks and stock issues from 1926-1940.	Compares the relative performance of new issues with old stock before and after the 1933 SEC Act.	Finds no evidence that greater disclosure has lead to an improvement in the efficiency of the market or in a lower cost of capital.

Table 2

Public Versus Private Enforcement.

Panel A: Private Enforcement

	Market capitalization	Number of firms	IPOs	Block premia	Access to equity	Earnings manipulation	Ownership concentration
Private enforcement	0.7113[a]	1.3100[b]	5.5700[a]	0.2818[b]	2.3605[a]	-12.4908[c]	-0.2306[b]
	(0.1535)	(0.4913)	(1.5166)	(0.1049)	(0.5610)	(7.2779)	(0.0962)
Efficiency judicial system	0.0396[b]	0.2326[a]	-0.0744	-0.0051	0.1828[a]	-0.3941	-0.0074
	(0.0196)	(0.0696)	(0.1970)	(0.0117)	(0.0582)	(0.7531)	(0.0094)
Log GDP per capita	0.0889[a]	0.2668[b]	1.0875[a]	-0.0062	0.1378	-0.6236	-0.0263[c]
	(0.0223)	(0.1082)	(0.2297)	(0.0217)	(0.0903)	(1.3012)	(0.0140)
Constant	-1.1558[a]	-2.5775[a]	-9.1621[a]	0.4071[b]	1.5276[b]	37.7485[a]	0.9370[a]
	(0.1967)	(0.7167)	(1.7745)	(0.1636)	(0.7095)	(9.4019)	(0.1002)
Observations	49	49	49	37	44	29	49
Adjusted R^2	0.56	0.69	0.39	0.32	0.57	0.25	0.37

Panel B: Public Enforcement

	Market capitalization	Number of firms	IPOs	Block premia	Access to equity	Earnings manipulation	Ownership concentration
Public enforcement	0.2525	0.9491[b]	3.5689[b]	-0.0212	0.3107	-8.5273	0.0774
	(0.2054)	(0.4531)	(1.6541)	(0.0689)	(0.5688)	(6.0478)	(0.0866)
Efficiency judicial system	0.0480[b]	0.2499[a]	-0.0026	-0.0038	0.1899[b]	-0.5103	-0.0095
	(0.0234)	(0.0711)	(0.2136)	(0.0123)	(0.0731)	(0.7458)	(0.0110)
Log GDP per capita	0.1034[a]	0.3013[a]	1.2267[a]	-0.0144	0.1982	-0.7688	-0.0284[c]
	(0.0221)	(0.1034)	(0.2668)	(0.0219)	(0.1257)	(1.2831)	(0.0153)
Constant	-1.2210[a]	-2.9110[a]	10.3742[a]	0.3995[b]	1.5136	37.3778[a]	0.8880[a]
	(0.2084)	(0.7264)	(1.9645)	(0.1812)	(1.0289)	(10.2820)	(0.1093)
Observations	49	49	49	37	44	29	49
Adjusted R^2	0.46	0.67	0.34	0.15	0.38	0.24	0.29

Panel C: Private and Public Enforcement

	Market capitalization	Number of firms	IPOs	Block premia	Access to equity	Earnings manipulation	Ownership concentration
Private Enforcement	0.6849[a]	1.0900[b]	4.7998[a]	-0.3100[a]	2.5366[a]	-9.0592	-0.2784[a]
	(0.1681)	(0.5260)	(1.6681)	(0.1128)	(0.6580)	(7.7796)	(0.0998)
Public Enforcement	0.0814	0.6767	2.3692	0.0702	-0.4469	-5.4508	0.1469
	(0.2062)	(0.4723)	(1.8046)	(0.0689)	(0.6966)	(6.8066)	(0.0951)
Efficiency judicial system	0.0402[b]	0.2376[a]	-0.0568	-0.0061	0.1845[a]	-0.4468	-0.0063
	(0.0198)	(0.0672)	(0.2043)	(0.0119)	(0.0582)	(0.7566)	(0.0096)
Log GDP per capita	0.0907[a]	0.2810[b]	1.1375[a]	-0.0005	0.1129	-0.7772	-0.0232[c]
	(0.0213)	(0.1053)	(0.2371)	(0.0235)	(0.0944)	(1.2605)	(0.0133)
Constant	-1.1899[a]	-2.8616[a]	10.1569[a]	0.3538[c]	1.8034[b]	39.4791[a]	0.8753[a]
	-0.2099	-0.757	-1.9611	-0.1802	-0.7371	-9.6686	-0.1089
Observations	49	49	49	37	44	29	49
Adjusted R^2	0.55	0.7	0.39	0.32	0.57	0.24	0.4

a = significant at 1 percent level; b = significant at 5 percent level; c= significant at 10 percent level.

Ordinary least squares regressions of the cross-section of countries. The dependent variables are defined as follows: (1) External market capitalization ratio is the average of the ratio of stock market capitalization of the ten largest, privately owned (the state is not a known shareholder) non-financial firms held by small shareholders (stock market capitalization outstanding not in the hands of the top three shareholders) to gross domestic product for the period 1996-2000; (2)Number of firms is the logarithm of the average ratio of domestic firms over the county's population (in millions) for the period 1996-2000; (3) IPO´s is the average of the ratio of the equity issued by newly' listed firms in a given country)in thousands= to its GDP)in millions) over the period 1996-2000; (4) Block premia is the difference between the price per share paid for a controlling block and the exchange price two days after the announcement of the control transaction; (5) Access to equity is an index that measures the extent to which business executives in a country agree with the statement "Stock markets are open to new firms and medium-sized firms". It is scaled from 1 (strongly agree) to 7 (Strongly disagree); (6) Earnings manipulation is an aggregate index of the pervasiveness of earnings management across countries between 1990 and 1999; (7) Ownership concentration is the average percentage of common shares not owned by the top three shareholders in the ten largest non-financial privately-owned (the state is not a known shareholder) firms in a given country.

Source: La Porta, Lopez-de-Silanes and Shleifer (2003)

Table 3

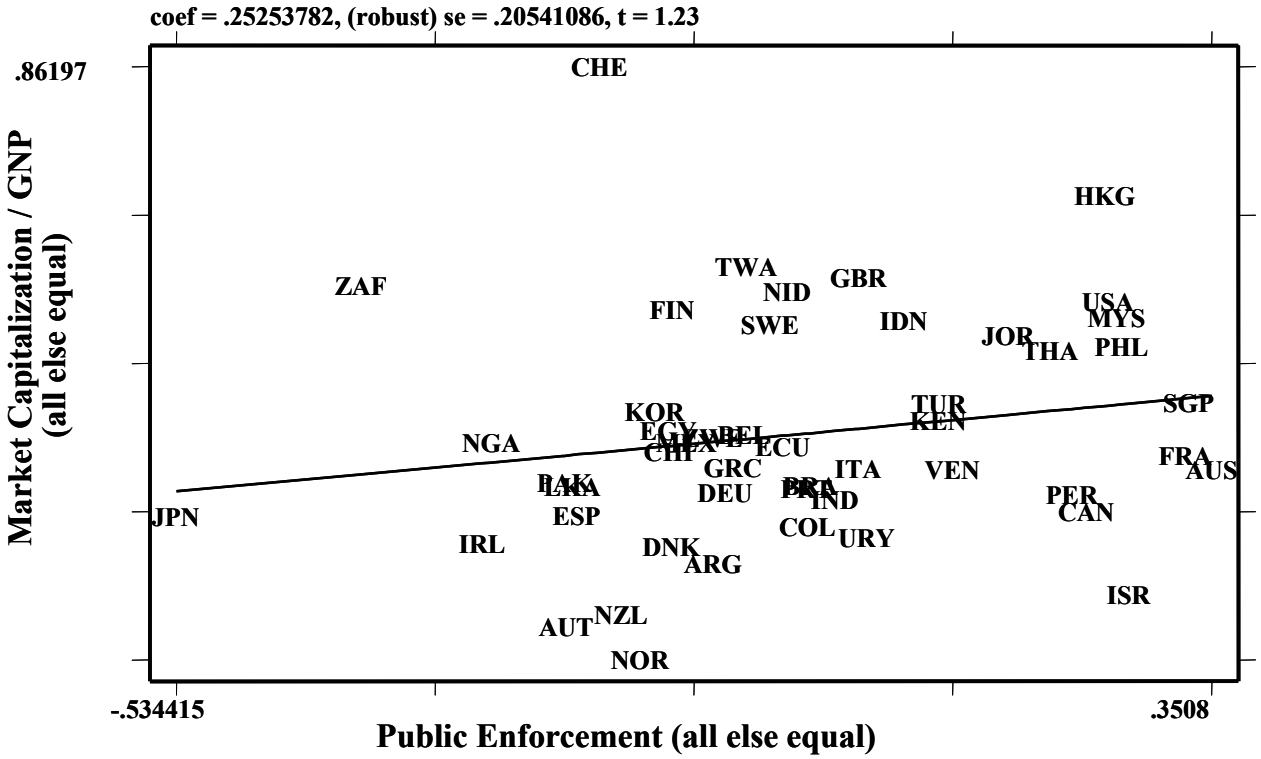
Indices of Regulation of Securities Markets by Level of Economic Development

By GDP level - Mean	Disclosure Requirements	Burden of Proof	Private enforcement	Supervisor's Attributes	Investigative Powers	Orders	Criminal Sanctions	Public Enforcement
Bottom 25 Percent	0.60	0.43	0.51	0.62	0.63	0.37	0.49	0.53
Middle 50 Percent	0.57	0.45	0.51	0.52	0.68	0.40	0.51	0.52
Top 25 percent	0.65	0.61	0.63	0.35	0.40	0.38	0.51	0.41
World mean	0.60	0.49	0.54	0.50	0.60	0.38	0.50	0.50
			T-tests					
Bottom 25 vs. middle 50	0.31	-0.25	0.03	1.39	-0.34	-0.22	-0.23	0.03
Bottom 25 vs. top 25	-0.63	-1.76[c]	-1.40	2.90[a]	1.48	-0.06	-0.23	1.32
Middle 50 vs. top 25	-1.00	-1.70[c]	-1.55	1.90[c]	2.22[b]	0.14	-0.07	1.35

a = significant at 1 percent level; b = significant at 5 percent level; c= significant at 10 percent level.
Source: La Porta, Lopez-de-Silanes and Shleifer (2003)

Figure 1

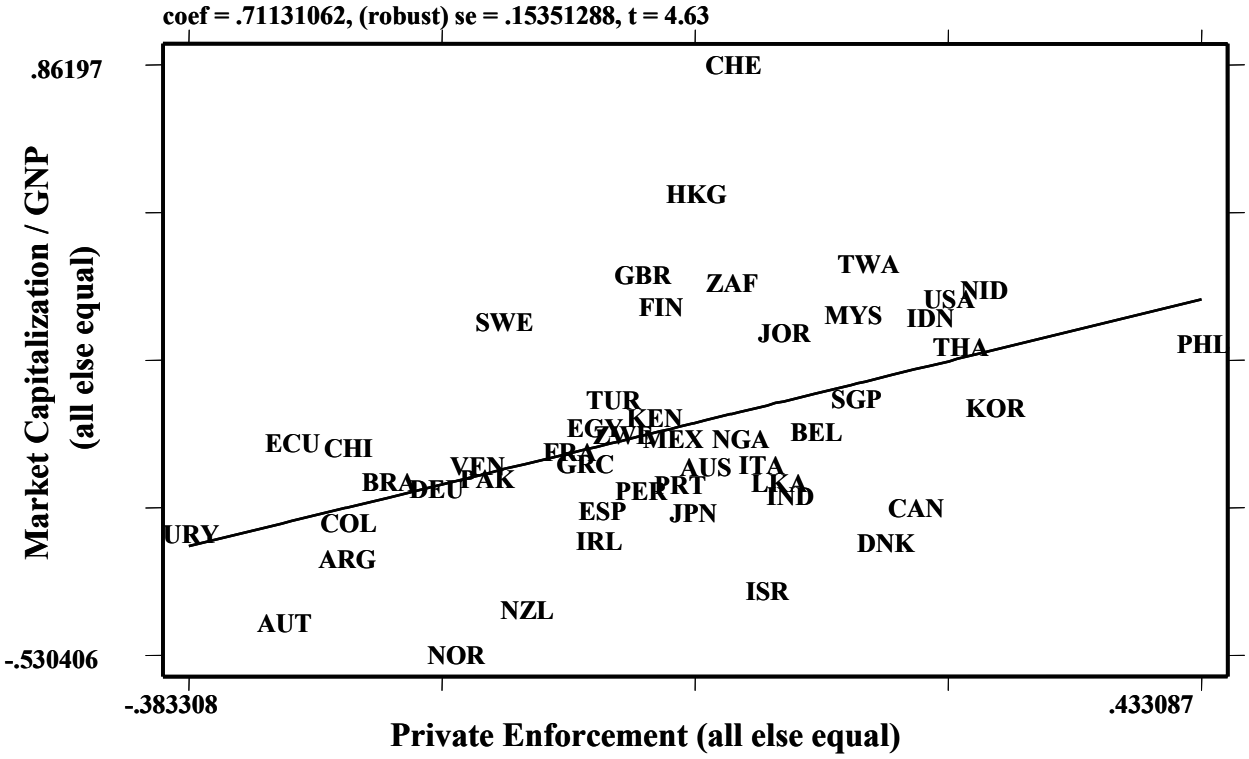
Public Enforcement: partial scatter plot of Public Enforcement index and Market Capitalization



The figure shows a partial scatter plot derived from a regression of the public enforcement index on market capitalization. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 2

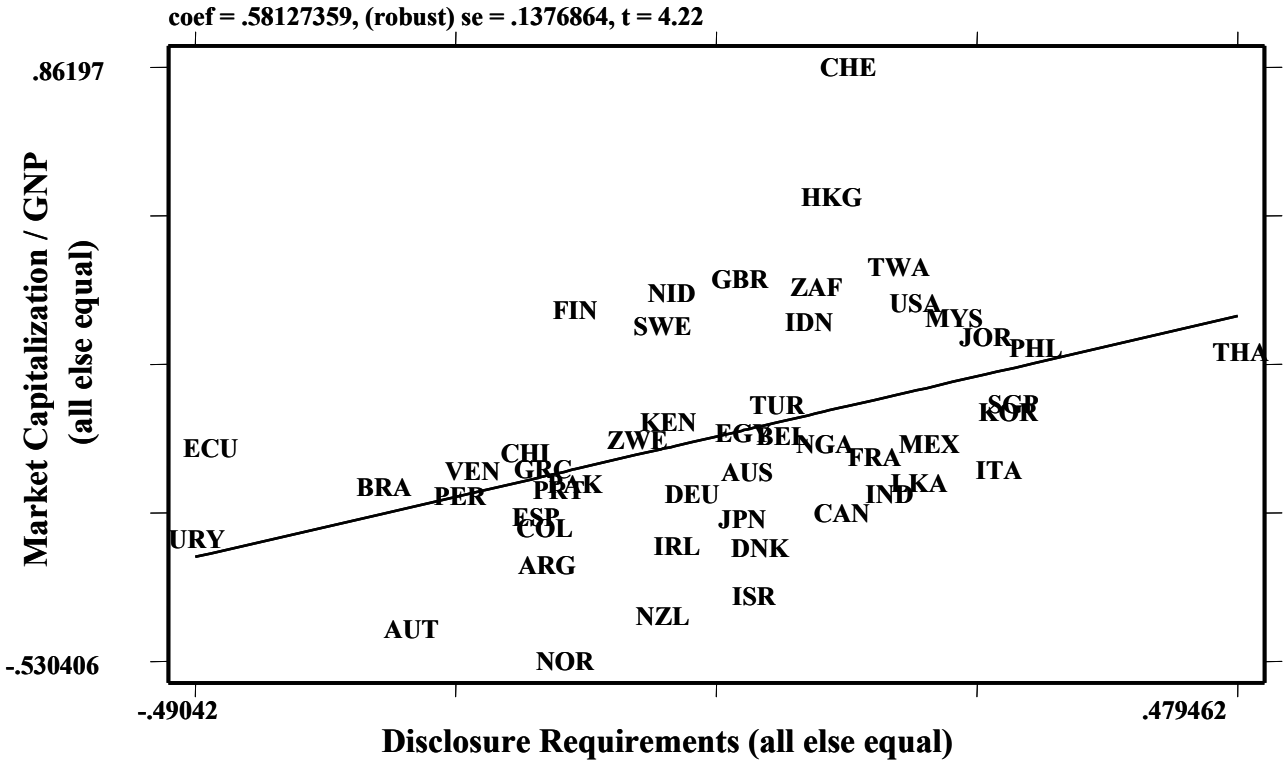
Private Enforcement: partial scatter plot of Private Enforcement Index and Market Capitalization



The figure shows a partial scatter plot derived from a regression of the private enforcement index on market capitalization. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 3

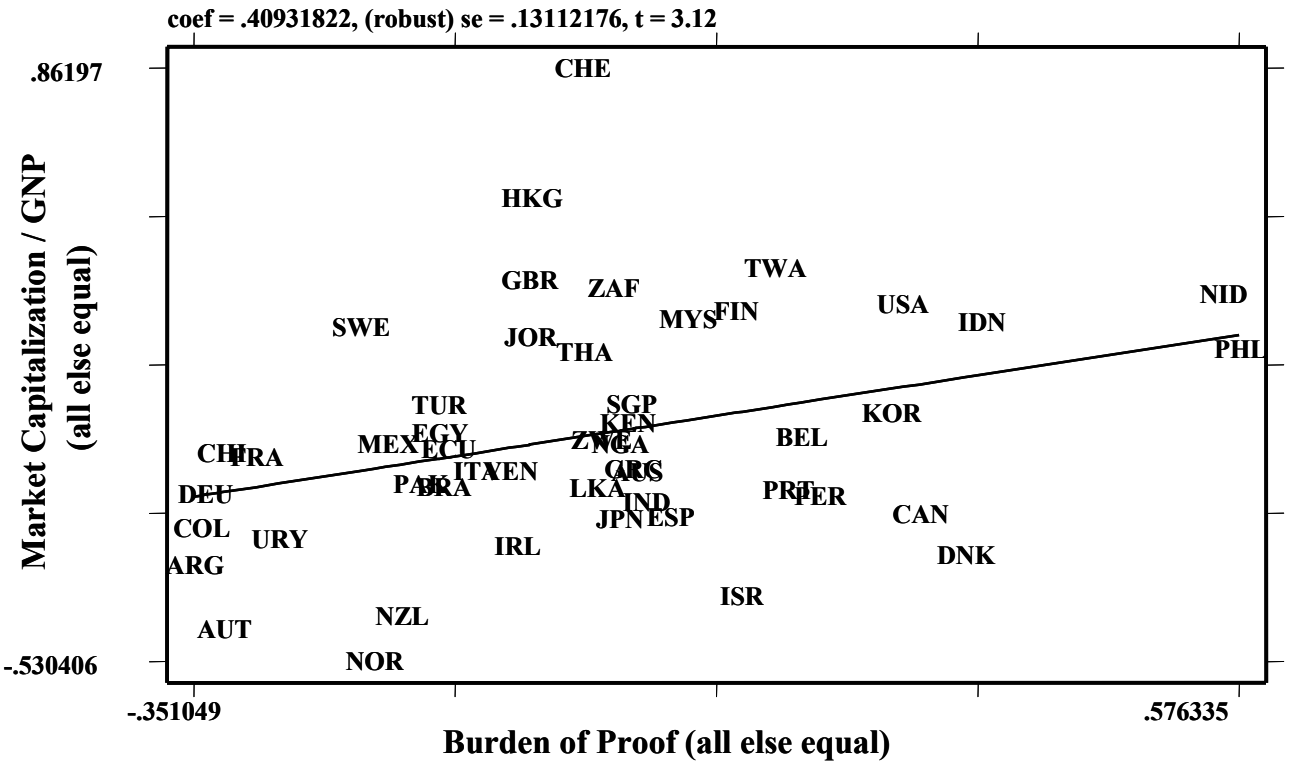
Private Enforcement: Partial scatter plot of Disclosure Requirements and Market Capitalization



The figure shows a partial scatter plot derived from a regression of the Disclosure Requirements sub-index on market capitalization. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 4

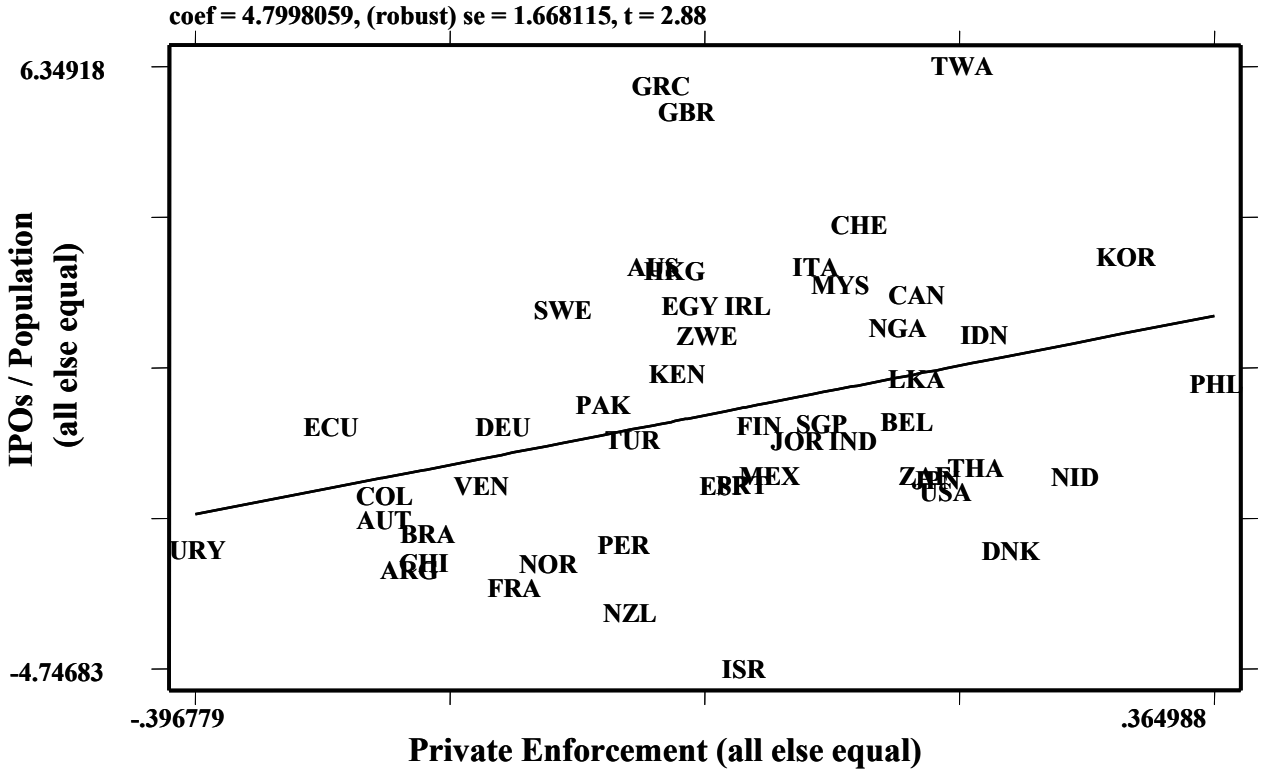
Private Enforcement: partial scatter plot of Burden of Proof and Market Capitalization



The figure shows a partial scatter plot derived from a regression of the burden of proof sub-index on market capitalization. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 5

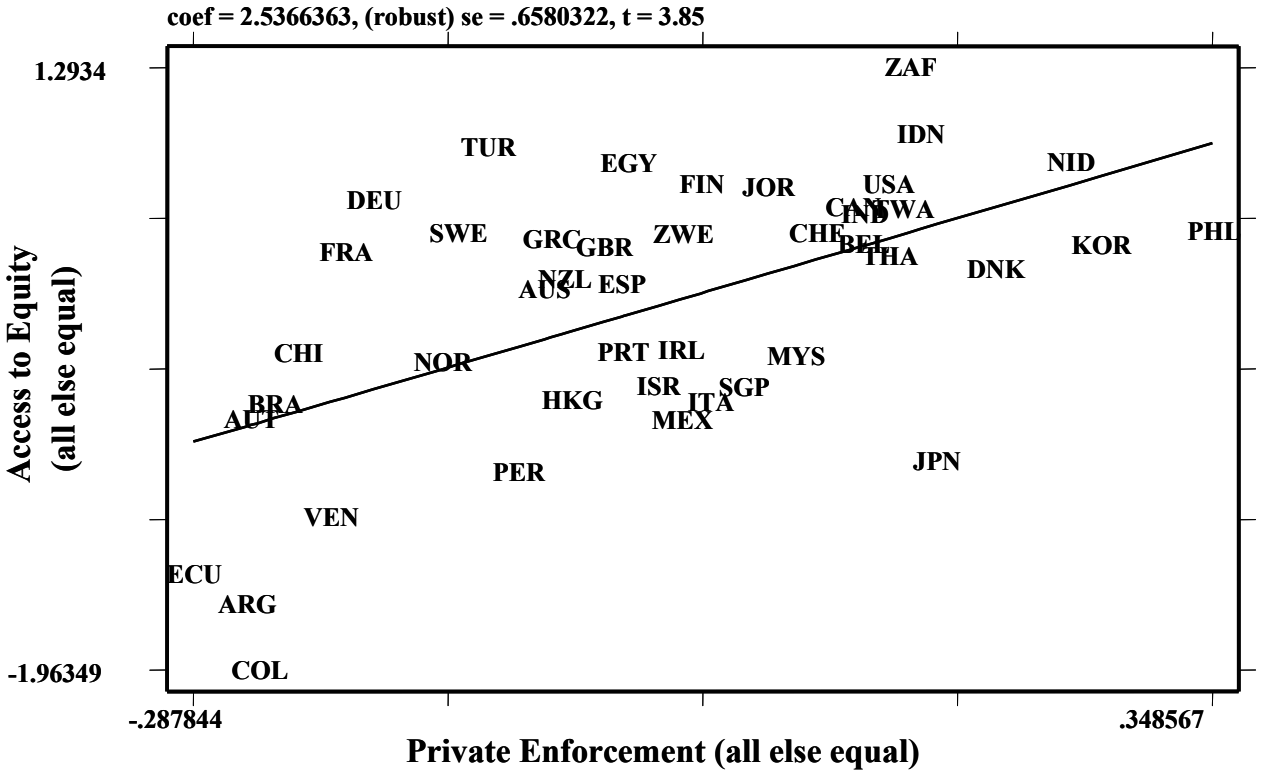
Private Enforcement: partial scatter plot of Private Enforcement Index and Initial Public Offers



The figure shows a partial scatter plot derived from a regression of the private enforcement index on IPOs \ Population. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 6

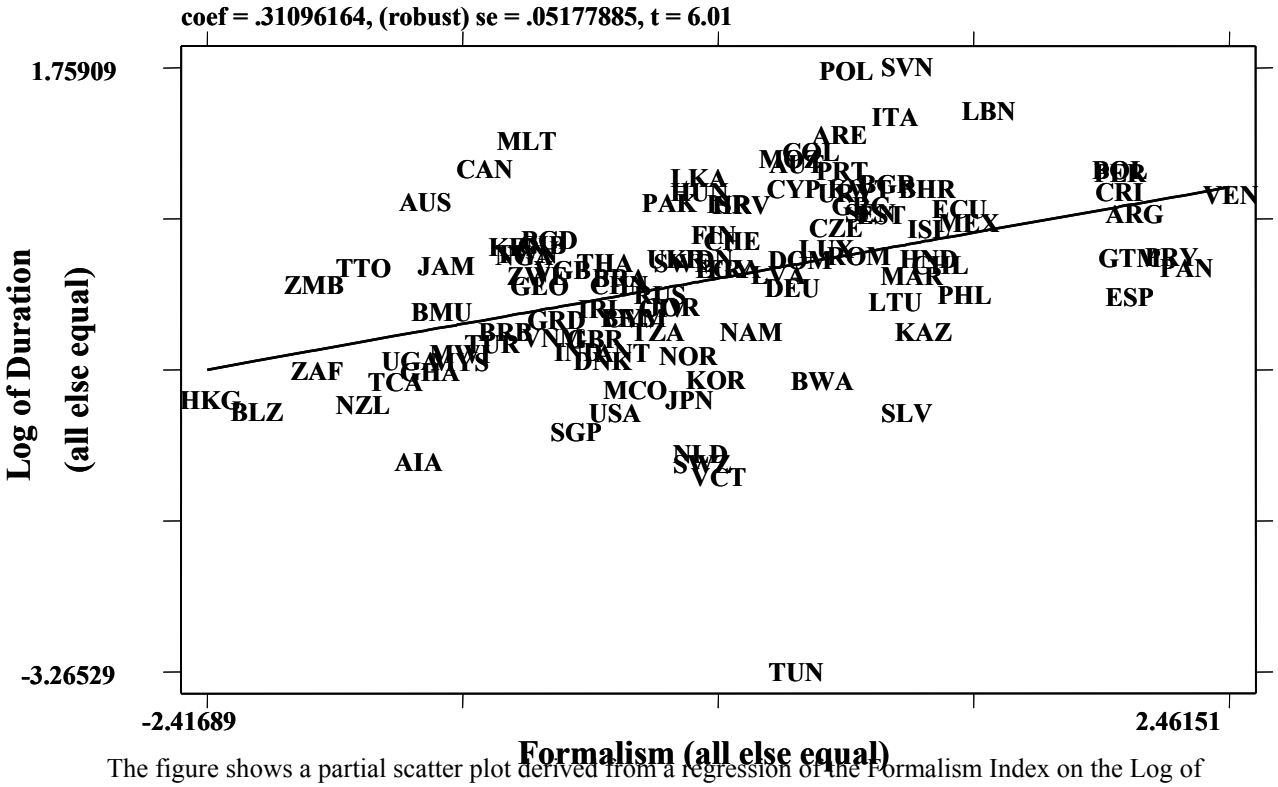
Private Enforcement: partial scatter plot of Private Enforcement Index and Access to Equity



The figure shows a partial scatter plot derived from a regression of the private enforcement index on Access to Equity. The regression controls for: (1) Anti-director rights; (2) Efficiency of the Judicial System and; (3) Log of GDP per capita.

Figure 7

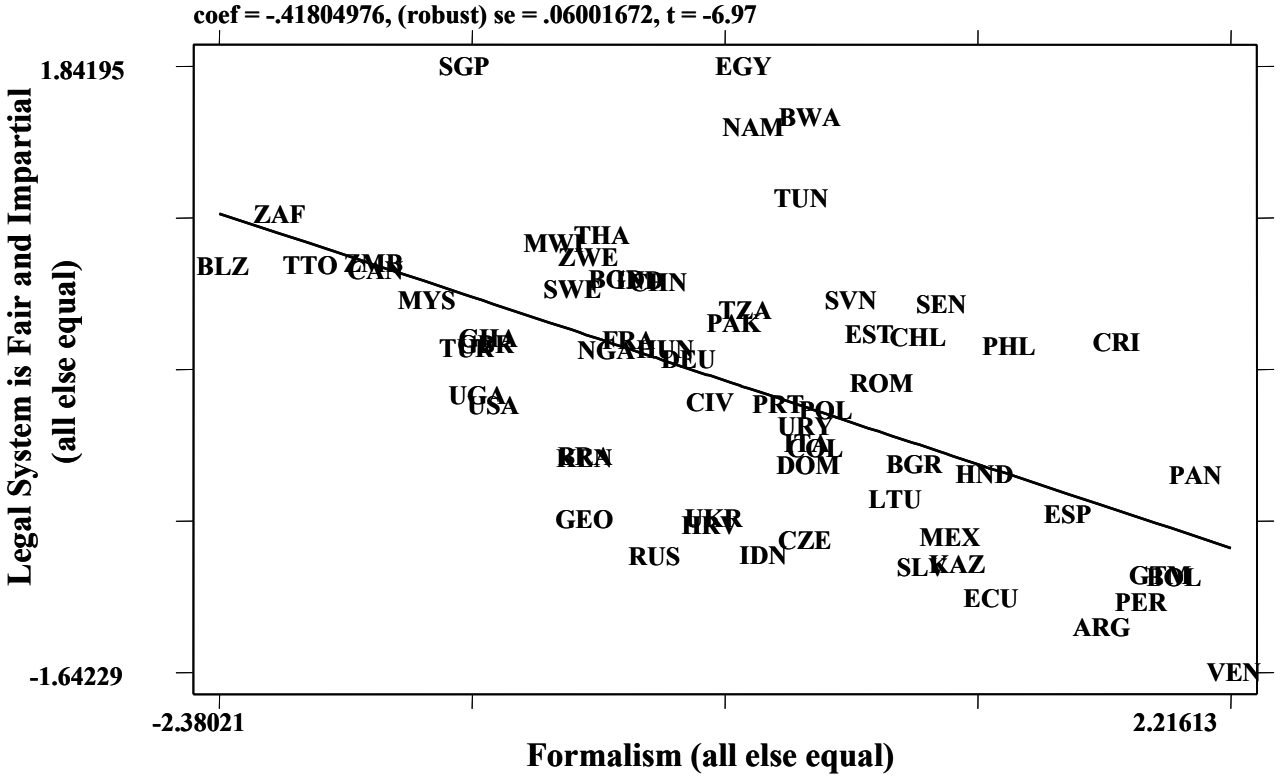
Court Formalism: partial scatter plot of Formalism Index and Log of Duration.



The figure shows a partial scatter plot derived from a regression of the Formalism Index on the Log of Duration. The regression controls for: (1) Judicial Efficiency; (2) Access to Justice; (3) Enforceability of Contracts; (4) Corruption and; (5) Human Rights.

Figure 8

Court Formalism: partial scatter plot of Court Formalism and Fairness and Impartiality of the Legal System



The figure shows a partial scatter plot derived from a regression of the Formalism Index on the Fairness and impartiality of the legal system. The regression controls for the following indexes: (1) Legal system is honest or uncorrupt; (2) Legal system is quick; (3) Legal system is affordable; (4) Legal system is consistent; (5) Court decisions are enforced and; (6) Confidence in legal system.